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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,511	07/15/2004	Piero Baglioni	P-7007-US	4466

7590 10/07/2005

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EXAMINER

CAMERON, ERMA C

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,511

Applicant(s)

BAGLIONI ET AL.

Examiner

Erma Cameron

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 12-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received:

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
2. The use of trademarks such as Igepal CO 520 at 9:14 has been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention. -

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4. Claims 12-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following are not described in such a way as to convey the relevant art:

a) 2:9 – thrielyne - this cannot be found in standard chemical dictionaries or CAS Registry database. A definition should be given for this material

b) 4:1 – it is not clear what decahydro is modifying.

c) 4:2: it is not clear what “anhydro and basic” is modifying.

d) 4:19 It is not clear what the particle size is as the open language “comprised” allows for literally any size of particle.

e) 5:5: It is not clear what is meant by “desired measures”.

f) 5:7/8: “low solubility salt in nanosized aqueous core” is not clear. Low has not been defined and is therefore vague, and “aqueous core” is confusing. Core of what? Core for what?

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g) 8:22: It is not clear what C12E4 is.

h) 9:14: Igepal CO520 has not been defined or described.

5. Claims 12-13, 18-19, 21-26 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for suspensions or processes involving suspensions wherein the particles are oxides, hydroxides or carbonates, does not reasonably provide enablement for any suspensions. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The specification does not support the claimed invention without the particles being oxides, hydroxides or carbonates.

6. Claims 12-17 and 21-26 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for suspensions or processes with suspensions wherein the solvent is water, ethyl ether, acetone or alcohols, does not reasonably provide enablement for any solvents. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

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It appears that the claimed invention aims to avoid CFC and other harmful organic solvents and thus not all solvents are suitable for the claimed invention.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 12-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) The use of plurals throughout the claims is questioned. For instance, claim 13 is to "basic suspensions", whereas its parent claim is to "suspension". Likewise, claims 15-17 are to the plural of oxide, hydroxide and carbonate. It is not clear is more than one is required.

b) Claim 12: it is not clear what "dimension" is meant. Diameter? Circumference?

c) Claim 12 and 13: "dimensions comprised between" is vague in that the open language "comprised" means that any size of particle is being claimed.

d) Claim 14: does basic modify oxide only, or hydroxides and carbonates as well?

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e) Claims 15-19: should be put into conventional Markush terminology – selected from the group consisting of.

f) Claim 17: it is not clear what “deca-hydro” or “anhydro and basic” modify.

g) Claim 17: is $\text{Bi}_2\text{O}_2\text{CO}_3$ a correct formula?

h) There is no antecedent basis for

claim 18	the solvents
claim 21	the particles to be suspended
claim 21	the appropriate solvent
claim 23	the oxides
claim 25	the papers to be deacidified

i) Claim 21: is dependent on canceled claim 11.

For examination purposes, the examiner will consider claim 21 to be dependent on claim 12.

j) Claim 21: “appropriate” is vague and not defined.

k) Claim 20: the term hydroxide is redundant after the formula.

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- l) Claim 24: “low” has not been defined and is therefore vague.
- m) Claim 24: the process has not been described in such a manner as to be understandable. How does mixing two emulsions produce a salt, and what is the aqueous core?
- n) Claim 25: “mass-deacidification” has not been defined or described adequately.
- o) Claim 26: it is not clear what is meant by “consolidation”.
- p) Claim 26: it is not clear what would fall into the category of “porous materials”.
- q) Claim 18: is confusing in that there are two “and’s” in the grouping.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

10. Claims 12-16 and 18 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by the admitted state of the prior art.

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The admitted state of the prior art is that Ca, Mg and Ba hydroxide aqueous solutions are known to deacidify paper, as is MgO (1:21-2:19). The use of the open language "comprised" for the dimensions, and the lack of specificity of what dimension is meant, means that the prior art anticipates these claims.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 12-17, 21, 23 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kundrot (4522843).

'843 teaches basic metal oxides, hydroxides and carbonates, of Ca, Mg, etc with a particle size of 10-900 nm (which overlaps with applicant's claimed range) in a suspension to deacidify books and other imaged materials (see Abstract, 1:53-4:5) by immersing or spraying (Example 4). The particles can be formed by attrition of the preformed oxides (3:4-11), which appears to be the same as slaking of oxides. The term "consolidation" in claim 26 is so vague that the process of deacidifying paper appears to fall within the category of "consolidation".

13. Claims 12-17, 21, 23 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leiner et al (6080448).

'448 teaches basic metal oxides, hydroxides and carbonates, of Ca, Mg, etc with a particle size of 50-2000 nm (which overlaps with applicant's claimed range) in a suspension to deacidify books and other imaged materials (see Abstract, 3:16-4:14) by immersing or spraying (7:1-43). The particles can be formed by attrition of the preformed oxides (3:35-42, which appears to be the same as slaking of oxides. The term "consolidation" in claim 26 is so vague that the process of deacidifying paper appears to fall within the category of "consolidation".

14. Claims 12, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1134302.

'302 teaches mixing two microemulsions to obtain particles of a new nanometers to about 200 nanometers [0013]-[0028]. The particle size overlaps that claimed by applicant.

15. Claims 12-14, 16, 18-22 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ambrosi et al (Langmuir, 17(14), pp 4251-4255, 2001).

Ambrosi teaches Ca hydroxide, made by mixing NaOH and CaCl₂ in homogeneous phase at high T, with rapid stirring, with a particles size as low as 100 nm on a side, as a material

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to restore wall paintings or deacidify paper. The dispersion can be in water or propan-1-ol (see entire article). Regarding claim 20, it would have been obvious to one of ordinary skill in the art to have optimized the solvent mixture through no more than routine experimentation.

16. Claims 12-14, 16, 18-22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salvadori et al (Langmuir, 17(8), pp 2371-2374, 2001).

Salvadori teaches Ca hydroxide, made by mixing NaOH and CaCl₂ in homogeneous phase at high T, with rapid stirring, with a particles size as low as 30-60 nm, as a material to restore wall paintings or stone. The dispersion can be in water or 2-propanol, and is made with an ultrasonicator (see entire article). Regarding claim 20, it would have been obvious to one of ordinary skill in the art to have optimized the solvent mixture through no more than routine experimentation.

Double Patenting

17. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

18. Claims 12-14, 18-19 and 25-26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-16 of copending Application No. 10/509107 (published as US2005/0175530). Although the conflicting claims are not identical, they are not patentably distinct from each other because the oxides and hydroxides of the instant application overlap with the oxides and hydroxides of '107. The oxides and hydroxides of each are used treat paper and other materials

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

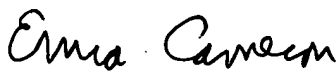
19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ERMA CAMERON
PRIMARY EXAMINER

Erma Cameron
Primary Examiner
Art Unit 1762

October 3, 2005